

The relationship between education and companies: Who should change what, and how?

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Abstract

The Quebec manufacturing sector has its own particularities: it has a high percentage of foreign ownership, it is composed mostly of small businesses and it is geared to serving the large but faltering US market. Indeed, international trade accounts for such an overwhelming part of this economy that the foreign trade ratios are proportionally greater here than in China or in many other countries associated with the world economy. The recent downturn in US consumption and construction as well as the rapid rise in the value of the Canadian currency has had a noticeable effect on this sector. Here in Quebec, our largest export is electricity, albeit in the shape of aluminum bars, followed by airplanes. Both these exports have little industrial design content.

Over the last 40 years, universities and colleges teaching design and industrial design in Quebec have developed or applied teaching methods and programs that regularly involve the manufacturing sector. Typically, these collaborations include student workshops on projects submitted by industry, scarce industrial visits, invited critics from the industry and prizes for student projects awarded by manufacturers. Lately, entrepreneurial projects developed by design students and business plans accompanying final design projects have been added to teaching practices. However, designers and manufacturing companies still maintain a less than optimal relationship.

After surveying over 190 graduate designers, we found that design schools' graduates have been much less successful in entering, and thus playing their role within, the manufacturing sector than the professional service sector (design consultancies). Whereas the fabrication sector employs over half of all Quebec industrial designers, only a little more than a quarter of industrial design graduates actually practice in this sector. By contrast, the service sector employs roughly a third of industrial designers and that is also the proportion of graduates who embrace careers in this sector.

We would argue that design schools' cultural project is often at odds with the projects of manufacturing entrepreneurs. Although design schools share many cultural elements with that of manufacturing entrepreneurs, as a subculture, they seem to hold onto different values, myths, symbols, rituals, taboos and heroes. In general, the values we see cherished by Quebec business are coloured by the small business owner's personal values which often include: competition, success, wealth creation, teamwork, client satisfaction, responsibility to shareholders. The values we can observe within the culture of Design school are highly influenced by the design

community's professional values: modernity, originality, personal expression, beauty and creativity. There are, of course, some shared values.

The curriculum at our schools tend to reinforce designs' professional and aesthetic values above all else. Management, and to a lesser extent, design process, are often left out. The design project, or rather the design of projects, comprise half the curriculum of all schools. This is fine, yet it creates a lasting impression within our own profession that the product is the end, whereas for business, the flux of products is a means to attain its goal which, may we remind everyone, is to "maintain an organization of people geared to trade products with its clients in a profitable manner". Few, if any, of the lecturers in our universities come from the fabrication sector and almost all of them come from academia or the service sector. Our students thus lack models of the variety of professional practices available to them. It is a well-established belief, within our community, that designers are the user's champions. Yet, there is little evidence in the way we train designers that they have tools or specific expertise to make this claim. More importantly, industry does not believe that this is the case. As designers, we also see ourselves as "bearers of the creative project" within industry. Both the CEOs and the owners of manufacturing companies that we have interviewed have rejected this definition, as they see themselves as bearers of the creative project.

Recently, there has been a lot of talk about design thinking and the application of abductive logic to business. My compatriot, Professor Roger Martin, is a champion of this notion with his convincing books "The Opposable Mind" and "The Design of Business". Many design teachers have seen in this an opportunity to express the all-encompassing power of the design process and to apply it to the larger project of creating and re-designing entire business models of companies. This entails that designers are not only excellent at developing products, a complex and challenge ridden occupation in itself, but also at configuring and reconfiguring human organizations. This requires both knowledge and know-how in the various functions of a business, including, marketing, sales, production, finance, logistics, a keen sense of measuring and avoiding undue risks, and superior leadership. This seems too tall an order to fill for the typical industrial designer and certainly not what the 13 designers we have observed within industry cherish as a professional goal. Professor Martin's books addresses managers and entices them to use our methods and processes, it is ironic that designers may take it as a call to manage industry.

It is good that we be ambitious about what design or designers can contribute to mankind. This is a trait of all professions: doctors aspire to rid their patients of suffering and even of illness, accountants wish to help their clients make better informed financial decisions, and policemen make an oath to apply law and maintain order. But, to ascertain our cultural objectives, it would be much better to start by understanding the culture we want to change, or modify, or invest, rather than to try vainly to impose a cultural hegemony on others.

For this reason, we propose that some design university workshop projects should begin to encompass teams made up of various professions. This has been done in the past and has often

led to an experience of frustration for many design students and their teachers. It shows the divide between how we see the world and how others do. Resolving these disparities is key in achieving design success within companies. Business or entrepreneurial culture as well as design culture should be taught to design students so that they may acquire sufficient perspective on their own biases and thus better establish dialogue with their colleagues in a wide variety of professional backgrounds. Finally, efforts should be deployed to obtain better presence, within our design schools, of lecturers and experts working within the manufacturing sector so as to permit an enrichment of our own culture.